

## ABSTRACT OF THE DISCLOSURE

A method for balancing the load of a parallel processing system having a plurality of parallel processing elements arranged in a loop, wherein each processing element has a local number of tasks associated therewith comprising determining within each processing element a total number of tasks present within the loop, calculating a local mean number of tasks within each processing element, and calculating a local deviation within each processing element. The method also comprises determining the sum deviations within each processing element for one-half the loop in an anti-clockwise direction and in a clockwise direction, determining clockwise and anti-clockwise transfer parameters within each processing element, and redistributing tasks among the processing elements in response to the clockwise and anti-clockwise transfer parameters.